

REMARKS

The above amendments and these remarks are responsive to the Office Action issued on November 30, 2005. By this response, claim 29 is newly added. No new matter is added. Claims 1-10 and 12-29 are now active for examination.

The Office Action dated November 30, 2005 allowed claims 13-16, 27 and 28. Claims 1-9, 12 and 17-26 were rejected under 35 U.S.C. §103(a) as being anticipated by Jackson (U.S. Patent No. 5,724,743) in view of Ripingill, Jr. et al. (U.S. Patent No. 6,473,980). Claim 10 stood rejected under 35 U.S.C. §103(a) as being unpatentable over Jackson and Ripingill, and further in view of Stam et al. (U.S. Patent No. 5,923,027).

Applicants respectfully submit that the claim rejections are overcome and the objection is addressed in view of the amendments and/or remarks presented herein.

The Obviousness Rejection of Claims 1 and 17 and Their Dependent Claims Is Overcome

Claim 1 was rejected as unpatentable over Jackson in view of Ripingill. The obviousness rejection is respectfully overcome because Jackson and Ripingill cannot support a prima facie case of obviousness.

Claim 1 describes a position determination system that includes at least one invisible light emitting diode configured to emit strobed invisible light thereby **illuminating** an optically scannable target such that the light is retro-reflected to an image sensing device and forms an image of the target. A visible indicator is provided to conclusively indicate whether the at least one invisible light emitting diode is operative. Claim 17 is a means-plus-function claim comparable to claim 1.

On the other hand, Ripingill relates to a device for training soldiers using a rifle 13 to aim a target 16. The target 16 includes forty-eight red light LEDs 18 arranged along orthogonal and vertical axes 20 and 22 of the target 16 (Fig. 2). Several sensors 24 are provided near the bull's eye of the target 16 in four distinctive clusters spaced adjacent to and around the bull's eye. When the soldier fires rifle 13, an infrared laser diode 10 on the rifle 13 emits an invisible energy beam when the trigger is pulled. The invisible light beam is sensed by, and energizes, certain sensors 24 depending on the impact location of the invisible beam. The energized sensors 24 in turn selectively energize red light LEDs 18, to provide a visible feedback to the soldier the approximate horizontal and vertical displacement of the impact location of the infrared laser beam. The other reference, Jackson, was cited for its description related to a camera-based alignment system.

In rejecting claims 1 and 17, the Examiner alleged that the red light LEDs 18 in Ripingill to be similar to the invisible light emitting diode as described in the claims. However, the red light LEDs 18 in Ripingill in fact emit "visible" light, not invisible light as described in claims 1 and 17.

An alternative construction of Ripingill is that the infrared laser diode 10 and the energized red LEDs are comparable to the claimed invisible LEDs and the visible indicator, respectively. However, even under such construction, the combination of Jackson and Ripingill cannot support an obviousness rejection.

Jackson and Ripingill respectively describe endeavors in different fields: Jackson describes wheel alignment technologies, and Ripingill relates to shooting training devices. Furthermore, the invisible laser diode 10 in Ripingill is used to track the impact point of a bullet,

not to “illuminate” the target “such that the light is retro-reflected to the image sensing device,” as described in the claims. The teachings in both references are significantly different. There is no specific teaching or motivation for an ordinary skilled person in the wheel alignment field would not have been motivated to modify Jackson’s system with Ripingill.

Furthermore, the invisible laser diode 10 in Ripingill is used to track the impact point of a bullet, **not** to “illuminate” the target “such that the light is retro-reflected to the image sensing device,” as described in the claims. The single ray of tracking invisible light is insufficient to illuminate the target. Furthermore, the invisible light in Ripingill is used to activate a light sensor, and is **not** retro-reflected to an image sensing device for forming an image of the target. Therefore, even if Jackson is modified by Ripingill, the combination of the references do not meet the limitation which requires that “the at least one diode and circuit being configured to emit strobed invisible light thereby illuminating the optically scannable target such that the light is retro-reflected to the image sensing device and the image sensing device detects and forms an image of the target.”

In addition, contrary to the Examiner’s contention, the red LEDs 18 in Ripingill do not “conclusively” indicate whether the invisible laser diode is operative. There are many factors that may cause the red LEDs 18 not to be turned on, such as poor aiming by the soldier, non-operating sensors 24, etc. Accordingly, even if the red LEDs are not turned on, it cannot be concluded that the invisible laser diode is not working.

Since there is not sufficient motivation to combine Jackson and Ripingill, and even if Jackson and Ripingill are combined, the combined documents do not meet every limitation of claims 1 and 17, Jackson and Ripingill cannot support a prima facie case of obviousness.

Accordingly, claims 1 and 17 are patentable over Jackson and Ripingill. Favorable reconsideration of claims 1 and 17 is respectfully requested.

Claims 2-10, 12 and 18-25, directly or indirectly, depend on claims 1 and 17, respectively. Therefore, Claims 2-10, 12 and 18-25 are patentable over Jackson and Ripingill by virtue of their dependencies.

The Rejection of Claim 26 Is Overcome

Claim 26 describes a position determination system including a visual indicator for indicating a manner by which an object under test should be manipulated such that an image sensing device of the system obtains images in a desirable manner, wherein the visual indicator is part of a camera and light subsystem. As the Examiners acknowledged during a previous in-person interview and a recent telephone discussion on January 10, 2006, Jackson does not disclose these features. Ripingill also fails to alleviate the deficiency of Jackson. Accordingly, Jackson and Ripingill cannot support a prima facie case of obviousness.

Moreover, it is submitted that claim 26 is substantially parallel to allowable claim 27. Accordingly, claim 26 should be allowable for at least the same reasons as for claim 27 as well as based on its own merits. Favorable reconsideration of claim 26 is respectfully requested.

New Claim 29 Is Patentable

New claim 29 depends on claim 1 and further describes that the visible light emitting diode is disposed in the camera and light subsystem, not on the target. In a telephone discussion with the Examiner on January 26, 2006, the Examiner indicated the feature as described in claim 29 would be patentable over the documents of record. It is submitted that claim 29 is in condition for allowance. Favorable consideration of claim 29 is respectfully requested.

CONCLUSION

For the reasons given above, Applicants believe that this application is in condition for allowance, and request that the Examiner give the application favorable reconsideration and permit it to issue as a patent. If the Examiner believes that the application can be put in even better condition for allowance, the Examiner is invited to contact Applicants' representatives listed below.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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